Lack of Relationship of Parental Response to Infection with HBV and Offspring Gender in Thailand

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OBJECTIVE : To compare the sex ratio of offspring of HBV anti-genemic parents with offspring of parents without HBV antigenemia.

BACKGROUND : The immune response to hepatitis B virus (HBV) in parents has been related to the sex ratio of their children (1). In a study of families in a Greek village, Drew et al.(2) reported the following relationship of parental response to HBV infection and offspring male/female sex ratio :

Either parent HBsAg (+) and anti-HBs (-), 2.50;
Both parents HBsAg (-) and anti-HBs (-), 1.46;
Both parents HBsAg (-) and either anti-HBs, (+) 1.09;
Either parent HBsAg (+) and anti-HBs (+), 0.93.

METHODS : Data collected in previous epidemiologic studies of HBV were re-examined and the relationship of parental response to HBV infection and sex ratio was evaluated for each study.

RESULTS : Results are presented in Table 1. In the three studies in which both mothers and fathers were tested, the sex ratio of the total number of living offspring did not differ between families with at least one antigenemic parent and without an antigenemic parent (3-5). A fourth relevant study (not shown in Table 1) was conducted in 1972-1973 (6). Blood specimens from 1626 consecutive women in labor at a Bangkok maternity hospital were tested for antigen and antibody by AUSRIA-125 (Abbott Laboratories) and immunoelectroosmophoresis, respectively. The male to female sex ratios of the newborn children of 92 HBsAg (+) anti-HBs (-), 1391 HBsAg (-), and 137 HBsAg (-) anti HBs (+) mothers were respectively, 1.14, 1.09, and 1.04. These data do not support the hypothesis that the sex of a child born in Thailand is appreciably influenced by the response of his parents to infection with HBV.

REFERENCES

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Table I. Relationship of Parental Response to Infection with HBV and Offspring Gender, SEATO Lab-AFRIMS Studies.

Year	Population Studied	N Families	Detection Method (Ag/Ab)	Either parent HBsAg(+), Anti-HBs(-)		Both parents HBsAg(-) Anti-HBs(-)		Both parents HBsAg(-) either anti-HBs(+)		Either parent HBsAg (+) Anti-HBs(+), other HBsAg(-)	
				Live Child Male/Female	Sex Ratio[a]	Live child Male/Female	Sex Ratio[a]	Live Child. Male/Female	Sex Ratio[a]	Live child. Male/Female	Sex Ratio[a]
1971-72	Random urban families	74	AUSRIA[b]-125/PHA	9/9	1.00(0.35-2.84)	23/22	1.05(0.56-1.97)	92/93[d]	0.99(0.74-1.35)	3/4	0.75(0.11-4.43)
1974-45	Families of selected women in labor in an urban hosp.	168	AUSRIA-1[b]/ PHA	58/50	1.16(0.76-1.70)	10/11	0.91(0.35-2.36)	86/85	1.01(0.73-1.37)	0/0	-
1976	Rural[c] village families	114	AUSRIA-II[b]/ AUSAB[b]	36/41	0,88(0.55-1.41)	40/42	0.95(0.55-1.51)	117/100	1.17(0.93-1.63)	3/3	1.00(0.13-7.47)

a. Numbers in parentheses indicate 95% confidence limits

b. Manufactured and distributed by Abblott Laboratories

c. Blood specimens obtained from 76% of the total population of a rural villege.